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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,387

07/24/2006

Erik Gosuinus Petrus Schuijers

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BRIARCLIFF MANOR, NY 10510

EXAMINER

ROBERTS, SHAUN A

ART UNIT

PAPER NUMBER

2626

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,387	Applicant(s) SCHUIJERS ET AL.	
	Examiner SHAUN ROBERTS	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to application No. 10/597,387 filed on 7/24/2006. All claims have been examined and are currently pending.

Drawings

1. The drawings are objected to because *they fail to provide verbal labels for the blocks used in the block and flow diagrams in figures 1-3, and 5*. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 6-7, 15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 15, the claims are written in such a way that makes it very difficult to understand and comprehend the Applicant's ideas. For the purpose of applying art *parameter values* are interpreted as being values associated with the stereo portions of the signal (which are included in the extension data), and *time association* is interpreted as the relationship between the time, frequency, and stereo characteristics to properly reproduce and not interfere/alter the imaging and not create artifacts.

Also rejected for lack of antecedent basis, where ***the time scaling factor*** had not been previously mentioned.

Regarding claim 17, it is not clear what is meant by a record carrier. For the purpose of applying art it is interpreted as a medium for carrying out the function of a computer program

Regarding claim 6, it is unclear how to determine the *first* time association in response to a previous time association.

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Regarding claim 7, it is unclear how to determine the *first* parameter value in response to a previous parameter value.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue (US 2001/0032072).

Claim 1 uses means-plus function language, and will be examined according to 112 6th paragraph.

Regarding claims 1 and 15 Inoue teaches a method of time scaling a signal ([0001-0002]: *converting the speed; speech speed*), the method comprising the steps of:

receiving an input signal comprising a first signal and extension data ([0029]: *receives an acoustic frame signal*);

generating a time scaled signal of the first signal;

means for generating a frequency sample blocks for the time scaled signal, each frequency sample block corresponding to a fixed time interval of the time scaled signal, the fixed

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time interval being independent of the time scaling factor ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding* - where these steps are incorporated when time-scaling audio);

determining a first time association between a first parameter value of the extension data and a first frequency sample block having an associated first time interval of the time scaled signal ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding*; [0054] - where these steps are incorporated when time-scaling stereo audio);

determining a second parameter value associated with a second frequency sample block in response to the first time association and the first parameter value;

modifying data of the second frequency sample block in response to the second parameter value; and

generating time domain output sample blocks from the frequency sample blocks (*output signal*)

(- These steps are common steps involved in time scaling of multiple channels/stereo audio, where the *parameter values* are interpreted as being values associated with the stereo portions of the signal (which are included in the extension data), and *time association* is interpreted as the relationship between the time, frequency, and stereo characteristics to properly reproduce and not interfere/alter the imaging and not create artifacts. The parametric representation of the audio makes the signal suitable for post-processing operations such as time scaling. Also see *Chang 2003/0105539 – Time Scaling of Stereo Audio*).

Regarding claim 2 Inoue teaches wherein the means for determining the first time

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association is operable to determine the first frequency sample block as that having an associated time interval corresponding to a time instant associated with the first parameter value ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding; [0054]* - where these steps are known and incorporated when discussing time-scaling stereo audio and interpolation; and the parametric representation of the audio makes the signal suitable for post-processing operations such as time scaling. Also see *Chang 2003/0105539 – Time Scaling of Stereo Audio*).

Regarding claim 3 Inoue teaches wherein the first time association comprises an indication of a time position of the parameter value within the first time interval ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding; [0054]* - where these steps are incorporated when discussing time-scaling stereo audio and interpolation; time association is interpreted as the relationship between the time, frequency, and stereo characteristics to properly reproduce and not interfere/alter the imaging and not create artifacts; the parametric representation of the audio makes the signal suitable for post-processing operations such as time scaling. Also see *Chang 2003/0105539 – Time Scaling of Stereo Audio*).

Regarding claim 4 Inoue teaches means for determining **(515)** a second time association between a third parameter value of the extension data and a third frequency sample block; and wherein means for determining the second parameter value **(515)** is operable to perform an interpolation in response to the first parameter value, the first time association, the third

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parameter value and the second time association (*Abstract; [0076]; [0082]; [0050]: parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding; [0054]* - where these steps are incorporated when discussing time-scaling stereo audio and interpolation; time association is interpreted as the relationship between the time, frequency, and stereo characteristics to properly reproduce and not interfere/alter the imaging and not create artifacts; the parametric representation of the audio makes the signal suitable for post-processing operations such as time scaling. Also see *Chang 2003/0105539 – Time Scaling of Stereo Audio*).

Regarding claim 5 Inoue teaches wherein the interpolation is a linear interpolation (*[0050]* - where linear interpolation is a very well known and simple form of interpolation).

Regarding claim 6 Inoue teaches wherein the means for determining the first time association (**(515)**) is operable to determine the first time association in response to a previous time association (*[0050]: parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding; [0054]* - where these steps are incorporated when discussing time-scaling stereo audio and interpolation; Also see *Chang 2003/0105539 – Time Scaling of Stereo Audio*).

Regarding claim 7 Inoue teaches means for determining (**(515)**) a scaled time offset between consecutive parameter values of the extension data and wherein the means for determining the first time association (**(515)**) is operable to determine a time instant of the first

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parameter value in response to a previous parameter value and the scaled time offset and to generate the time association in response to the time instant ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding*; [0054] - where these steps are incorporated when discussing time-scaling stereo audio and interpolation; Also see *Chang 2003/0105539 – Time Scaling of Stereo Audio*).

Regarding claim 8 Inoue teaches wherein the means for determining the second parameter value (515) is operable to associate the first parameter value with a nominal time position within the first time interval in response to the time association and to determine the second parameter value in response to the first parameter value and the nominal time position ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding*; [0054] - where these steps are incorporated when discussing time-scaling stereo audio and interpolation; Also see *Chang 2003/0105539 – Time Scaling of Stereo Audio*).

Regarding claim 9 Inoue teaches wherein the means for determining the second parameter value (515) is operable to determine the second parameter value in response to an interpolation in response to the first parameter value and the nominal time position ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding*; [0054] - where these steps are incorporated when discussing time-scaling stereo audio and interpolation; Also see *Chang 2003/0105539 – Time Scaling of Stereo Audio*).

Regarding claim 10 Inoue teaches wherein the input signal is a parametric encoded audio signal (*Abstract*, [0050]; [0076]; [0082]).

Regarding claim 12 Inoue teaches wherein the extension data comprises parametric stereo data (*Abstract*, [0050]; [0076]; [0082]).

Regarding claim 13 Inoue teaches wherein the first parameter value is a parameter value of a stereo image parameter selected from the group consisting of: a. Inter-channel Intensity Differences parameters; b. Inter-channel Time or Phase differences parameters; and c. Inter-Channel Coherence parameters ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding*; [0054] - where these steps are incorporated when time-scaling stereo audio; where these are known characteristics of stereo imaging).

Regarding claim 14 Inoue teaches wherein the means for modifying is operable to modify the data of the second frequency sample block to generate at least a first stereo channel frequency sample block ([0050]: *parametric encoding method...can convert the speech speed by interpolating the encoding parameters in the process of decoding*; [0054]).

Regarding claim 16 Inoue teaches a computer program enabling the carrying out of a method according to claim 15 ([0077]).

Regarding claim 17 teaches a record carrier comprising a computer program as claimed in claim 16 ([0077] – where a record carrier is interpreted as a medium for carrying out the function of a computer program).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (US 2001/0032072).

Regarding claim 11 Inoue does not specifically mention wherein the means for generating the frequency sample blocks (**507**) comprise complex-exponential modulated filter banks.

However, exponentially modulated filter banks have been used in the art for time-frequency and frequency-time transform for parametric stereo decoding and it thus would have been obvious to one of ordinary skill in the art to use these filter banks to reduce the complexity of parametric stereo decoding.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Schuijers, E Et Al. *"Advances in Parametric Coding for High-Quality Audio."* AES Convention Paper 5852, Amsterdam, March 22, 2003.

-Schuijers, E Et Al. *"Progress On Parametric Coding For High Quality Audio."* Phillips Digital Systems Laboratories, Eindhoven, 2003.

- Time-scale modification of music signals based on polyphase filterbanks and constrained time-domain processing - Sakurai et al (US 6,982,377)
- Time-scale modification of data-compressed audio information – Covell et al (US 6,842,735)
- Time-scale modification method and apparatus for digital signals – Koezuka (US 6,801,898)
- Speed control playback of parametric speech encoded digital audio – Rhee (US 7,239,999)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHAUN ROBERTS whose telephone number is (571)270-7541.

The examiner can normally be reached on Mon - Thur 8-5 est.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571)272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. R./
Examiner, Art Unit 2626

/Talivaldis Ivars Smits/
Primary Examiner, Art Unit 2626

9/4/2009